



# YJG150N03A

## N-Channel Enhancement Mode Field Effect Transistor

### Product Summary

|                                   |          |
|-----------------------------------|----------|
| $V_{DS}$                          | 30 V     |
| $I_D$                             | 150 A    |
| $R_{DS(ON)}$ ( at $V_{GS}=10V$ )  | 2.0 mohm |
| $R_{DS(ON)}$ ( at $V_{GS}=4.5V$ ) | 3.3 mohm |
| 100% EAS Tested                   |          |
| 100% $V_{DS}$ Tested              |          |

### General Description

Trench Power MV MOSFET technology  
Excellent package for heat dissipation  
High density cell design for low  $R_{DS(ON)}$   
Moisture Sensitivity Level 1  
Epoxy Meets UL 94 V-0 Flammability Rating  
Halogen Free

### Applications

DC-DC Converters  
Power management functions  
Backlighting

### Absolute Maximum Ratings ( $T_A=25$ unless otherwise noted)

| Parameter      | Symbol   | Limit | Unit |
|----------------|----------|-------|------|
| Source Voltage | $V_{DS}$ | 30    | V    |

**YJG150N0**



## Typical Performance Characteristics

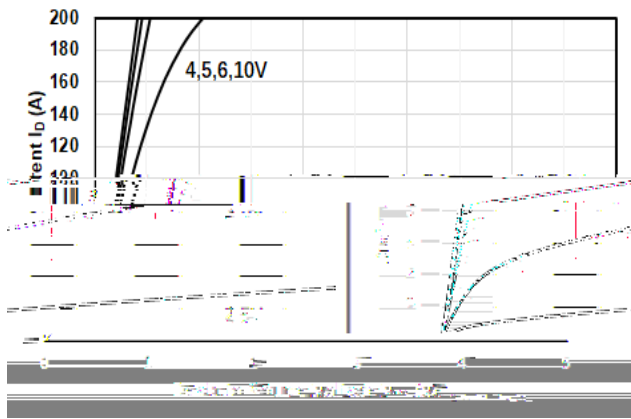


Figure1. Output Characteristics

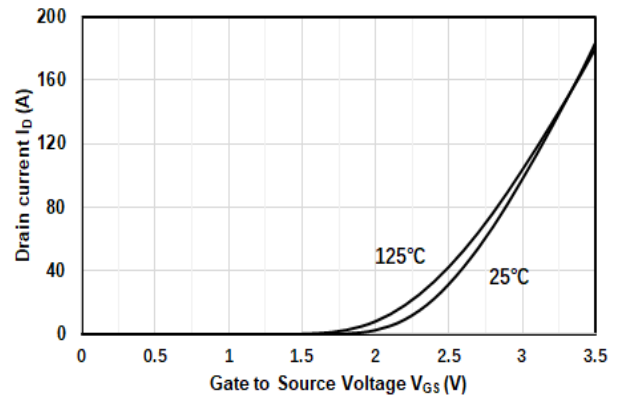


Figure2. Transfer Characteristics

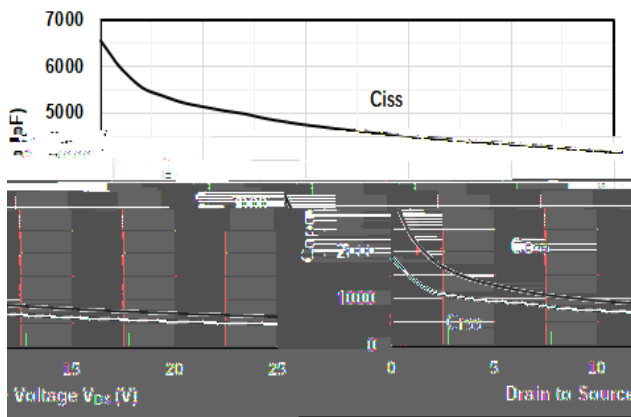


Figure3. Capacitance Characteristics

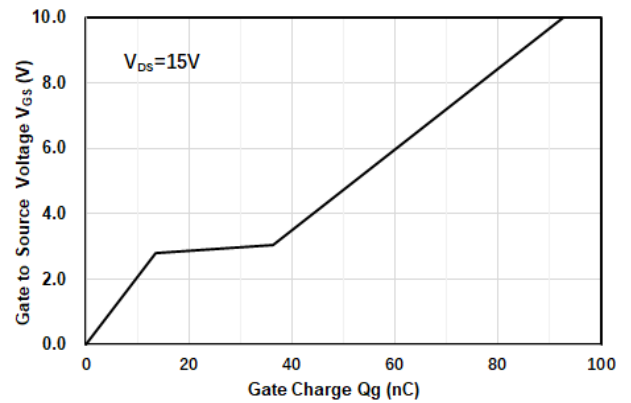


Figure4. Gate Charge

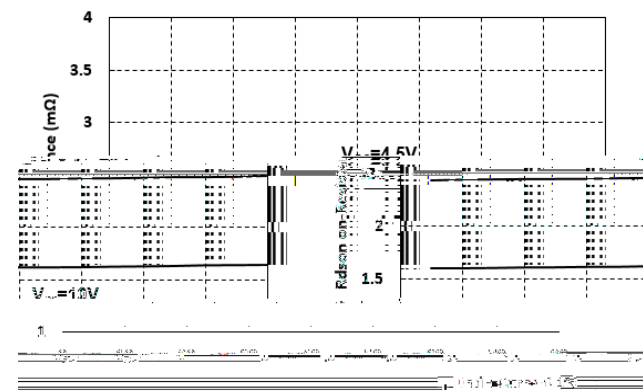


Figure5. Drain-Source on Resistance

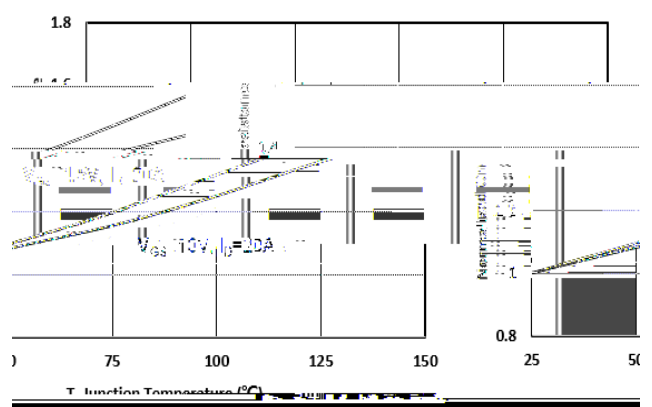


Figure6. Drain-Source on Resistance

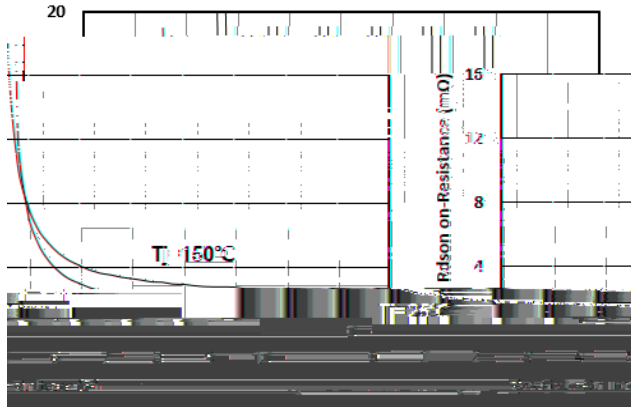


Figure7. On-Resistance vs  $V_{GS}$

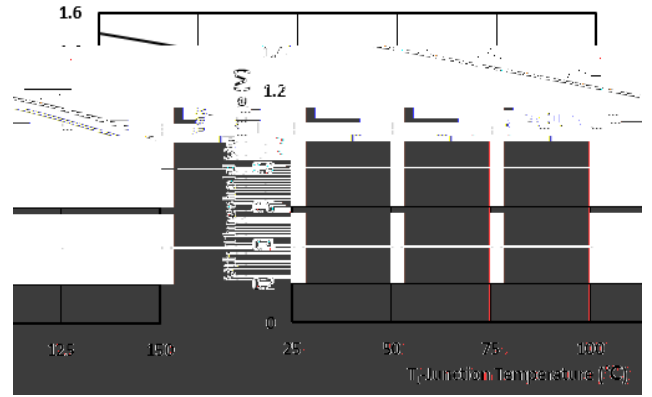


Figure8.  $V_{th}$  vs Temperature

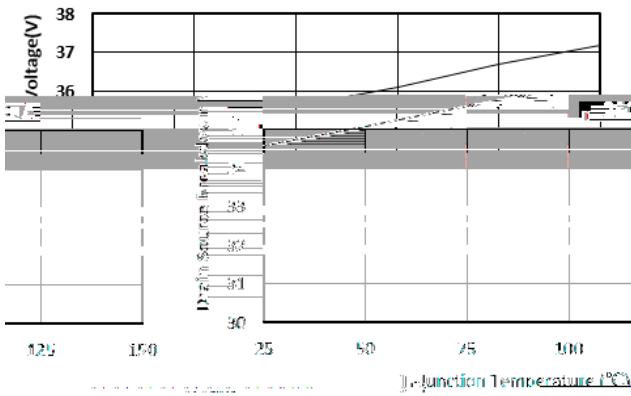


Figure9. Breakdown Voltage vs Temperature

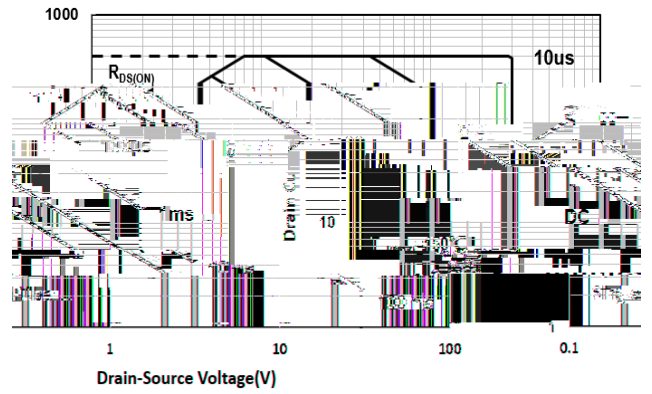


Figure10. Safe Operation Area

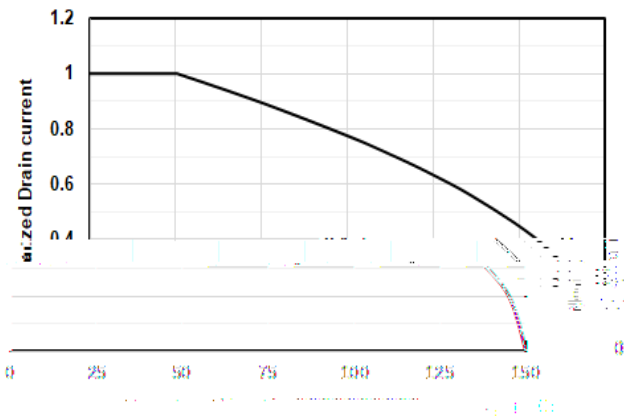


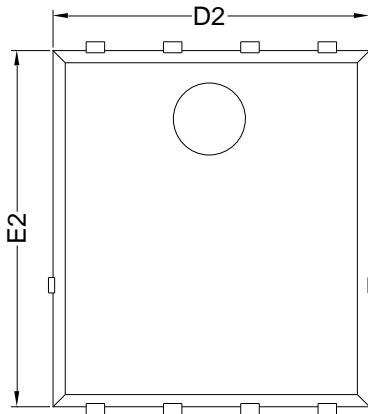
Figure11. Drain current vs. Case Temperature

**YJG150**

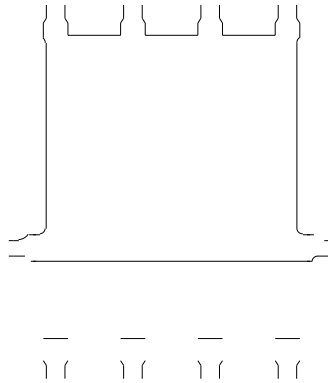


# YJG150N03A

## PDFN5060-8L-B-1.1MM Package Information



Top View



Bottom View

Side View

| SYMBOL | MILLIMETER |      |      |
|--------|------------|------|------|
|        | MIN        | NOM  | MAX  |
| D      | 5.15       | 5.35 | 5.55 |
| E      | 5.95       | 6.15 | 6.35 |
| A      | 1.00       | 1.10 | 1.20 |
| A1     | 0.254 BSC  |      |      |
| A2     |            |      | 0.10 |
| D1     | 3.92       | 4.12 | 4.32 |
| E1     | 3.52       | 3.72 | 3.92 |
| D2     | 5.00       | 5.20 | 5.40 |
| E2     | 5.66       | 5.86 | 6.06 |
| E3     | 0.254 REF  |      |      |
| E4     | 0.21 REF   |      |      |
| L1     | 0.56       | 0.66 | 0.76 |
| L2     | 0.50 BSC   |      |      |
| b      | 0.31       | 0.41 | 0.51 |
| e      | 1.27 BSC   |      |      |

Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.10$ mm.
3. The pad layout is for reference purposes only.



**Disclaimer**